UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/729,774	SCHREDER ET AL.
	Examiner	**Art Unit**	
	Jennifer L. Norton	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 January 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on <u>27 February 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The following is a 2nd Non-Final Office Action in response to the Amendment

received on 22 January 2007. Claims 2-15 are pending in this application.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 2-7 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by

U.S. Patent No. 5,881,115 (hereinafter Lipner).

4.   As per claim 2, Lipner discloses determining whether said current output is an

information type (col. 4, lines 12-13); and marking said current output as complete, if

said current output is said information type (col. 4, lines 15-19).

5.   As per claim 3, Lipner discloses after the executing step, storing a value of said

automatic expression to a destination reference (col. 3, lines 49-51).

6.   As per claim 4, Lipner discloses a control system that uses, sequential control

modules, said control system comprising:

        a user interface component (col. 3, lines 47-49, Fig. 1, element 33 and 35) that

provides at least a table view (Fig. 3), said table view comprising a plurality of outputs

of a selected step of at least one of said sequential control modules, wherein said

outputs comprise a combination of at least one automatic expression and at least one

interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63);

        an operator station (Fig. 1, element 19) that executes said user interface

component (col. 3, lines 44-47) and that responds to at least one input operator for

said interactive instruction (col. 2, lines 27-35, col. 3, lines 58-64, and col. 4, lines 19-

22); and

        at least one controller (Fig. 1, element 15 and col. 3, lines 18-21) that is

operated by executing said interactive instruction at least partly in response to said

operator input and said automatic expression automatically (col. 2, lines 27-35 and col.

4, lines 19-22 and 55-63).

7.   As per claim 5, Lipner discloses a journaling component (Fig. 1, element 37)

capable of being executing on said operator station for recording information related to

the execution of said sequential control module (col. 3, lines 49-51).

8.   As per claim 6, Lipner discloses said table view comprises:

a summary area that provides a name of said sequential control module and a

list of steps in said sequential control module, wherein said selected step is selected

from said list (col. 2, lines 10-13, col. 4, lines 53-55, col. 5, lines 3-5 and Fig. 3, element

49);

a details area that provides a step name and a step description for said selected

step (Fig. 3, element 65); and

a parameters area that provides a current value of at least one parameter

associated with said selected step (col. 5, lines 63-65 and Fig. 3, element 67).

9.   As per claim 7, Lipner discloses an additional details area (Fig. 3, element 61) for

information associated with said selected step (col. 5, lines 53-57).

10.   As per claim 9, Lipner discloses said details area includes a confirmation

component to receive a confirmation from said operator (col. 6, lines 15-16 and Fig. 3,

element 59).

11.   As per claim 10, Lipner discloses said user interface component also provides a

sequential function chart view (col. 4, lines 2-4 and Fig. 2, element 41).

12.   As per claim 11, Lipner discloses a computer readable medium having executable

instructions stored thereon to perform a method in a control system that uses

sequential control modules, said method comprising:

providing a type indication on a display for an instruction in a sequential control

module, said type being confirmable or informational (col.4, lines 12-13); and

receiving a confirmation from an operator before completing said instruction, if

said type is confirmable (col. 6, lines 15-16)

at least one of said executable instructions causing an interactive display screen

(col. 4, lines 35-39 and Fig. 3) to be presented to an operator that displays a plurality of

outputs (col. 4, lines 55-63 and col. 5, lines 62-65) of a selected step of at least one of

said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19),

wherein said outputs comprise a combination of both automatic expression and at least

one interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22);

at least one of said executable instructions causing a determination of whether a

current one of said outputs is an interactive instruction or an automatic expression (col.

2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that

an interactive instruction will occur);

at least one of said executable instructions causing, if said current output is an

interactive instruction, a determination of whether said interactive instruction has been

confirmed by said operator 9col. 6, lines 15-22);

a marking said current output complete (col. 4, lines 24-25); and

at least one of said executable instructions causing, if said current output is an

automatic expression, at least one controller (Fig. 1, element 5) in said control system

to execute said automatic expression 9col. 3, liens 13-17 and col. 4, lines 19-20).

13.   As per claim 12, Lipner discloses the computer readable medium further

comprising: at least one of said executable instructions causing at least one value of a

parameter to be associated with at least one of said outputs on said display screen (col.

5, lines 63-65 and Fig. 3, element 67).

14.   As per claim 13, Lipner discloses the computer readable medium further

comprising: at least one of said executable instructions causing additional information

about said current output to be displayed on said display screen (col. 5, lines 53-57 and

Fig 3, element 61).

15.   As per claim 14, Lipner discloses a method of providing interactive control in a

control system that uses sequential control modules, said method comprising:

presenting an interactive display screen (col. 4, lines 35-39 and Fig. 3) to an

operator that displays a plurality of outputs (col. 4, lines 55-63 and col. 5, lines 62-65)

of a selected step of at least one of said sequential control modules (col. 3, lines 28-29

and 49-51 and Fig. 1, element 19), wherein said outputs comprise a combination of at

least one automatic expression and at least one interactive instruction (col. 2, lines 27-

35 and col. 4, lines 19-22);

determining whether a current one of said outputs is an interactive instruction or

an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is

violated, it is determined that an interactive instruction will occur);

if said current output is an interactive instruction, determining whether said

interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

if said interactive instruction has been confirmed by said operator, marking said

current output complete (col. 4, lines 24-25); and

if said current output is an automatic expression, using at least one controller

(Fig. 1, element 5) in said control system to execute said automatic expression (col. 3,

lines 13-17 and col. 4, lines 19-20).

16.   As per claim 15, Lipner discloses a control system that uses sequential control

modules, said control system comprising:

an operator station (Fig. 1, element 19) that comprises a user interface

component (col. 3, lines 44-47) that provides a display to an operator (Fig. 3) and a

program that runs on said operator station an interactive procedure to present on said

display a table view (Fig. 3) comprising a plurality of outputs of an operator selected

step of at least one of said sequential control modules, wherein said outputs comprise a

combination of at least one automatic expression and at least one interactive instruction

(col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63); and

a controller (col. 3, lines 18-21 and Fig. 1, element 15) that executes said

automatic expression automatically and said interactive instruction at least partly in

response to one or more inputs of said operator to said operator station (col. 2, lines

27-35, col. 3, lines 58-64 and col. 4, lines 19-22).

Claim Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented
> and the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

18.   Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipner in

view of U.S. Patent No: 6,775,576 (hereinafter Spriggs).

19.   As per claim 8, Lipner does not expressly teach a trend area that provides a

graph of said at least one parameter associated with said selected step.

Spriggs teaches to a trend area that provides a graph of said at least one

parameter associated with said selected step (col. 19, lines 27-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a trend area to reduce capital cost and the traditional requirement for both expertise and human resources necessary to integrate and maintain prior systems is reduced (col. 2, lines 7-9).

20.   If, however the prior art is interpreted differently by a third party, the base reference and secondary reference teach "a display that provides a combination of at least one automatic expression and at least one interactive instruction" as follows:

21.   Claims 2-7 and 9-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lipner in view of U.S. Patent No. 4,803,039 (hereinafter Impink).

22.   As per claim 2, Lipner teaches as set forth above determining whether said current output is an information type (col. 4, lines 12-13); and marking said current output as complete, if said current output is said information type (col. 4, lines 15-19).

23.   As per claim 3, Lipner teaches as set forth above after the executing step, storing a value of said automatic expression to a destination reference (col. 3, lines 49-51).

24.   As per claim 4, Lipner teaches a control system that uses, sequential control

modules, said control system comprising:

a user interface component (col. 3, lines 47-49, Fig. 1, element 33 and 35) that

provides at least a table view (Fig. 3), said table view comprising a plurality of outputs

of a selected step of at least one of said sequential control modules (col. 2, lines 27-35

and col. 4, lines 19-22 and 55-63);

an operator station (Fig. 1, element 19) that executes said user interface

component (col. 3, lines 44-47) and that responds to at least one input operator for

said interactive instruction (col. 2, lines 27-35, col. 3, lines 58-64, and col. 4, lines 19-

22); and

at least one controller (Fig. 1, element 15 and col. 3, lines 18-21) that is

operated by executing said interactive instruction at least partly in response to said

operator input and said automatic expression automatically (col. 2, lines 27-35 and col.

4, lines 19-22 and 55-63).

Lipner does not expressly teach a display of a combination of at least one

automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic

expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one

interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

25.   As per claim 5, Lipner teaches as set forth above a journaling component (Fig. 1, element 37) capable of being executing on said operator station for recording information related to the execution of said sequential control module (col. 3, lines 49-51).

26.   As per claim 6, Lipner teaches as set forth above said table view comprises:

a summary area that provides a name of said sequential control module and a list of steps in said sequential control module, wherein said selected step is selected from said list (col. 2, lines 10-13, col. 4, lines 53-55, col. 5, lines 3-5 and Fig. 3, element 49);

a details area that provides a step name and a step description for said selected step (Fig. 3, element 65); and

a parameters area that provides a current value of at least one parameter associated with said selected step (col. 5, lines 63-65 and Fig. 3, element 67).

27.   As per claim 7, Lipner teaches as set forth above an additional details area (Fig.

3, element 61) for information associated with said selected step (col. 5, lines 53-57).

28.   As per claim 9, Lipner teaches as set forth above said details area includes a

confirmation component to receive a confirmation from said operator (col. 6, lines 15-

16 and Fig. 3, element 59).

29.   As per claim 10, Lipner teaches as set forth above said user interface component

also provides a sequential function chart view (col. 4, lines 2-4 and Fig. 2, element 41).

30.   As per claim 11, Lipner teaches a computer readable medium having executable

instructions stored thereon to perform a method in a control system that uses

sequential control modules, said method comprising:

providing a type indication on a display for an instruction in a sequential control

module, said type being confirmable or informational (col.4, lines 12-13); and

receiving a confirmation from an operator before completing said instruction, if

said type is confirmable (col. 6, lines 15-16)

at least one of said executable instructions causing an interactive display screen

(col. 4, lines 35-39 and Fig. 3) to be presented to an operator that displays a plurality of

outputs (col. 2, lines 27-35, col. 4, lines 19-22 and lines 55-63 and col. 5, lines 62-65)

of a selected step of at least one of said sequential control modules (col. 3, lines 28-29

and 49-51 and Fig. 1, element 19);

at least one of said executable instructions causing a determination of whether a

current one of said outputs is an interactive instruction or an automatic expression (col.

2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that

an interactive instruction will occur);

at least one of said executable instructions causing, if said current output is an

interactive instruction, a determination of whether said interactive instruction has been

confirmed by said operator 9col. 6, lines 15-22);

a marking said current output complete (col. 4, lines 24-25); and

at least one of said executable instructions causing, if said current output is an

automatic expression, at least one controller (Fig. 1, element 5) in said control system

to execute said automatic expression 9col. 3, liens 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one

automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic

expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one

interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

31.   As per claim 12, Lipner teaches as set forth above the computer readable medium further comprising: at least one of said executable instructions causing at least one value of a parameter to be associated with at least one of said outputs on said display screen (col. 5, lines 63-65 and Fig. 3, element 67).

32.   As per claim 13, Lipner teaches as set forth above the computer readable medium further comprising: at least one of said executable instructions causing additional information about said current output to be displayed on said display screen (col. 5, lines 53-57 and Fig 3, element 61).

33.   As per claim 14, Lipner teaches a method of providing interactive control in a control system that uses sequential control modules, said method comprising:

presenting an interactive display screen (col. 4, lines 35-39 and Fig. 3) to an operator that displays a plurality of outputs (col. 2, lines 27-35, col. 4, lines 19-22 and

55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential

control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19);

determining whether a current one of said outputs is an interactive instruction or

an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is

violated, it is determined that an interactive instruction will occur);

if said current output is an interactive instruction, determining whether said

interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

if said interactive instruction has been confirmed by said operator, marking said

current output complete (col. 4, lines 24-25); and

if said current output is an automatic expression, using at least one controller

(Fig. 1, element 5) in said control system to execute said automatic expression (col. 3,

lines 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one

automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic

expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one

interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of applicant's invention to modify the teaching of Lipner to include a display of

a combination of at least one automatic expression a major advantage of the display

generated in accordance with the invention is that all of the information is brought to

one place for use by the operator (col. 13, lines 52-55).

34.   As per claim 15, Lipner teaches as set forth above a control system that uses

sequential control modules, said control system comprising:

an operator station (Fig. 1, element 19) that comprises a user interface

component (col. 3, lines 44-47) that provides a display to an operator (Fig. 3) and a

program that runs on said operator station an interactive procedure to present on said

display a table view (Fig. 3) comprising a plurality of outputs of an operator selected

step of at least one of said sequential control modules (col. 2, lines 27-35 and col. 4,

lines 19-22 and 55-63); and

a controller (col. 3, lines 18-21 and Fig. 1, element 15) that executes said

automatic expression automatically and said interactive instruction at least partly in

response to one or more inputs of said operator to said operator station (col. 2, lines

27-35, col. 3, lines 58-64 and col. 4, lines 19-22).

Lipner does not expressly teach a display of a combination of at least one

automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic

expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one

interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of applicant's invention to modify the teaching of Lipner to include a display of

a combination of at least one automatic expression a major advantage of the display

generated in accordance with the invention is that all of the information is brought to

one place for use by the operator (col. 13, lines 52-55).

35.   Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipner in

view of Impink in further view of U.S. Patent No: 6,775,576 (hereinafter Spriggs).

36.   As per claim 8, Lipner in view of Impink does not expressly teach a trend area

that provides a graph of said at least one parameter associated with said selected step.

Spriggs teaches to a trend area that provides a graph of said at least one

parameter associated with said selected step (col. 19, lines 27-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of applicant's invention to modify the teaching of Lipner in view of Impink to

include a trend area to reduce capital cost and the traditional requirement for both

expertise and human resources necessary to integrate and maintain prior systems is

reduced (col. 2, lines 7-9).

Response to Declaration 37 CFR 1.132

37.   The Declaration 37 CFR 1.132 has been given full consideration, but not

persuasive and the rejection of claims 2-7 and 9-15 stand rejected as set forth above.

Response to Arguments

38.   Applicant's arguments see Remarks pgs. 2-4, filed 22 January 2007 with respect

to claims 2-7 and 9-15 under 35 U.S.C. 102(b) have been considered but are moot in

view of the new ground(s) of rejection.

39.   Applicant's arguments see Remarks pg. 4, filed 22 January 2007 with respect to

claim 8 under 35 U.S.C. 103(a) have been considered but are moot in view of the new

ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

The following references are cited to further show the state of the art with respect to a control interface system.

U.S. Patent No. 4,815,014 discloses a computer based system aids an operator in proceeding step-by-step through procedures for a complex process facility.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Knight
Supervisory Patent Examiner
Art Unit 2121